REMARKS

Applicant submits this response to the Office Action mailed June 14, 2006. In order to assure thorough consideration of the amendments herein, Applicant is submitting herewith a Request for a Continued Examination.

In response to the provisional double patenting rejection, Applicant repeats that it is willing to consider the necessity of a terminal disclaimer upon an indication of allowable subject matter in the present application.

At the outset, Applicant notes that it has amended the claims to limit those claims to methods where the manganese compound is used with a treat rate of at least 20 ppm of the coal that is combusted. The treat rate and ranges of treat rate now set forth in the claims are disclosed and taught in the specification on Page 7, Lines 1-4 of the detailed description. Applicant is focusing in these claims on the use of a relatively high treat rate of manganese compound in order to obtain the benefits of reduction in the amount of carbon in fly ash resulting from the combustion of coal. The treat rate of 20 ppm is the treat rate used in the actual testing that supported the present application as described in the example set forth on Page 7 of the specification.

Briefly, in the Office Action, claims 16-18 are rejected under 35 U.S.C §102(b) as anticipated by, or in the alternative, under 35 U.S.C §103(a) as obvious over Kukin '820. The remaining claims of the application are rejected under 35 U.S.C. §103(a) as obvious over Kerley, Kukin '503, or Rolfe alone or in view of Kukin '820. For one or more of the following reasons, and in view of the foregoing amendments, Applicant submits that the rejections are traversed.

Kukin '820 - - §102/§103

The Kukin '820 patent cannot be an appropriate anticipatory reference, because there is no reference in the application to the use of an organometallic manganese compound. Further, there is no use or disclosure of an organometallic compound that is a mononuclear metal compound or comprises clusters of about two to about 50 manganese atoms. Finally, there is no disclosure in Kukin '820 of the treat rate of an organometallic manganese compound comprising at least 20 ppm wt% of the coal. Accordingly, the anticipation rejection is traversed as a result of the lack of disclosure of Kukin '820.

In addition to the anticipation rejection, the Examiner also makes a rejection under §103 for obviousness based on Kukin '820 alone. The basis for this rejection is that the Examiner concludes that one of ordinary skill in the art would understand that they could use an organic or inorganic manganese compound. This foundation for the basis of this rejection is contradicted by the Kukin '820 reference itself and by the other references recognized by the Examiner. First, there is no cited basis for the naked conclusion that a person of ordinary skill in the art would know to use organic or inorganic manganese compounds. Second, there is no enabling disclosure or example of actual use of an organic manganese compound in the Kukin '820 patent. Instead, the Kukin '820 reference only discloses and enables the use of an inorganic manganese compound. Accordingly, there is no inherency argument that is available. And finally, the conclusory statement of the Examiner is contradicted by the Kukin '503 patent. The Kukin '503 patent is essentially contemporaneous with the Kukin '820 patent. They have a common inventor. The Kukin '503 reference would be known to the hypothetical person of ordinary skill in the art. Therefore, the hypothetical person of ordinary skill in the art would understand that the references in the Kukin '503 patent to the use of an organic manganese product were a failure versus the use

of the inorganic additive in that reference. As the Applicant has previously explained, there was some confusion with respect to the examples in the Kukin '503 patent. In fact, they show that the use of the organic manganese in that case was ineffective for the purposes of that patent.

In view of the foregoing, Applicant submits that the conclusion of the Examiner that Kukin '820 can be used as a basis for rejection of the claimed invention is not supported by the reference itself. The rejection is traversed.

Kerley and Kukin '820 - - §103

The Kerley patent discloses and teaches the use of an organometallic manganese compound in the combustion of coal. Kerley does not disclose a reduction of carbon in ash. There is no inherent disclosure in Kerley of such a reduction, because the treat rate of organometallic manganese in the example of Kerley is approximately 5.8 ppm manganese to the coal. Also, as explained in the Amendment and Response mailed on December 16, 2005, there is a significant difference between the soot and smoke disclosed in Kerley and the fly ash of the present invention. These terms are not interchangeable. It is not possible to justify that they are a same or obvious variation. This conclusion as supported by the industry article attached to that earlier Amendment and Response is unrebutted by the Examiner.

The Examiner appears to work around the shortcoming of Kerley by combining it with Kukin '820. Unfortunately, Kukin '820 is a disclosure of the use of an inorganic manganese compound only. There is no disclosure of an organic manganese. There is no disclosure of mononuclear metal compounds or clusters of about 2 to about 50 manganese atoms. Plainly stated, there is no intersection between the chemistry of Kerley and Kukin '820. Therefore, those references are not reasonably combined.

Finally, with respect to the potential argument of Kerley and its inherent disclosure, the actual treat rate shown in that patent is 5.8 ppm of manganese. The present invention is now claimed at a treat rate of at least 20 ppm. Therefore, there is no grounds or other support for any possible inherency argument.

For one or more of the foregoing reasons, the obviousness rejection based on Kerley or the combination of Kerley and Kukin '820 is traversed.

Kukin '503 and Kukin '820 - - §103

The Kukin '820 reference, as explained earlier, teaches and discloses the use of an inorganic manganese compound. Kukin '503 also emphasizes the use of an inorganic manganese compound. The very few references to the use of an organic manganese product in Kukin '503 are contrary to the successful teaching and examples in that reference. Importantly, Kukin '503 is very explicit with respect to the size of the particles discussed therein. The teaching of Kukin '503 is that a particle size of less than 0.1 microns is not effective to reduce deposits in a furnace and, to the contrary, results in an increase of deposits in the furnace. (Kukin '503, Column 5, Lines 30-34). Therefore, the Kukin '503 reference explicitly teaches away from the small size of the claimed compound that is noted as being a mononuclear metal compound or a cluster of about two to about fifty manganese atoms. As explained in detail in the most recent prior Amendment and Response, the size of the claimed invention is literally orders of magnitude smaller than the minimum 0.1 micron teaching of Kukin '503. Therefore, according to the explicit teachings of Kukin '503, the organic manganese now claimed would be a failure and would increase deposits.

In view of the foregoing, it is inappropriate to combine Kukin '503 and Kukin '820 to arrive at the claimed invention when the references themselves teach away from the claimed invention. The rejection is traversed.

Rolfe and Kukin '820 --- §103

Finally, Applicant addresses the rejection based on obviousness in view of Rolfe alone and in combination of Kukin '820. The Rolfe reference alone has no teaching of carbon in ash or the reduction thereof as a result of the use of any additive disclosed in Rolfe. Therefore, the reference alone is unable to be a basis for the obviousness rejection. In fact, as Applicant explained in the December 16, 2005 Amendment and Response, Rolfe does not support the proposition of a reduction of carbon deposits. As explained in Rolfe, the Rolfe invention merely moves the deposits from inside the combustion equipment to a bag filter or electrostatic precipitator, see Col. 6, lines 27-56. Therefore, Rolfe does not teach a reduction in carbon much less a reduction in carbon in ash.

Additionally, as explained herein, Kukin '820 only teaches the use of inorganic manganese which means relatively large particles. The size of the Rolfe particles is nowhere disclosed. Therefore, there is nothing in the combination of Rolfe and Kukin '820 that supports the disclosure of the small manganese compounds of the present invention. For at least the foregoing reasons, the rejection is traversed.

****

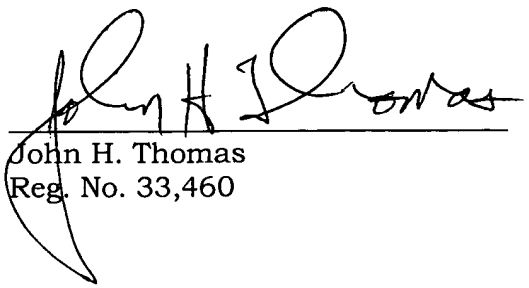
The foregoing arguments and observations of Applicant are in addition to the multiple technical arguments already raised by Applicant in the multiple prior responses in this application. Applicant believes that the Examiner is determined to find obviousness of the claimed invention. However, the references that are cited against the present application are insufficient alone or in combination to render the claimed invention unpatentable. Applicant respectfully requests that the

rejections be withdrawn in view of the foregoing amendments and arguments.

Favorable action is requested hereon.

The Commissioner is hereby authorized to charge any deficiencies in payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 50-2127.

Respectfully submitted,



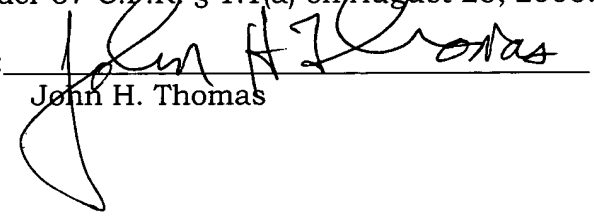
Date: August 25, 2006

John H. Thomas
Reg. No. 33,460

536 Granite Avenue
Richmond, Virginia 23226
Phone: (804) 344-8130
Fax: (804) 644-3643
E-Mail: info@ip-counsel.net

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the appropriate address at the U.S. Patent and Trademark Office required under 37 C.F.R. § 1.1(a) on August 25, 2006.

By: 
John H. Thomas